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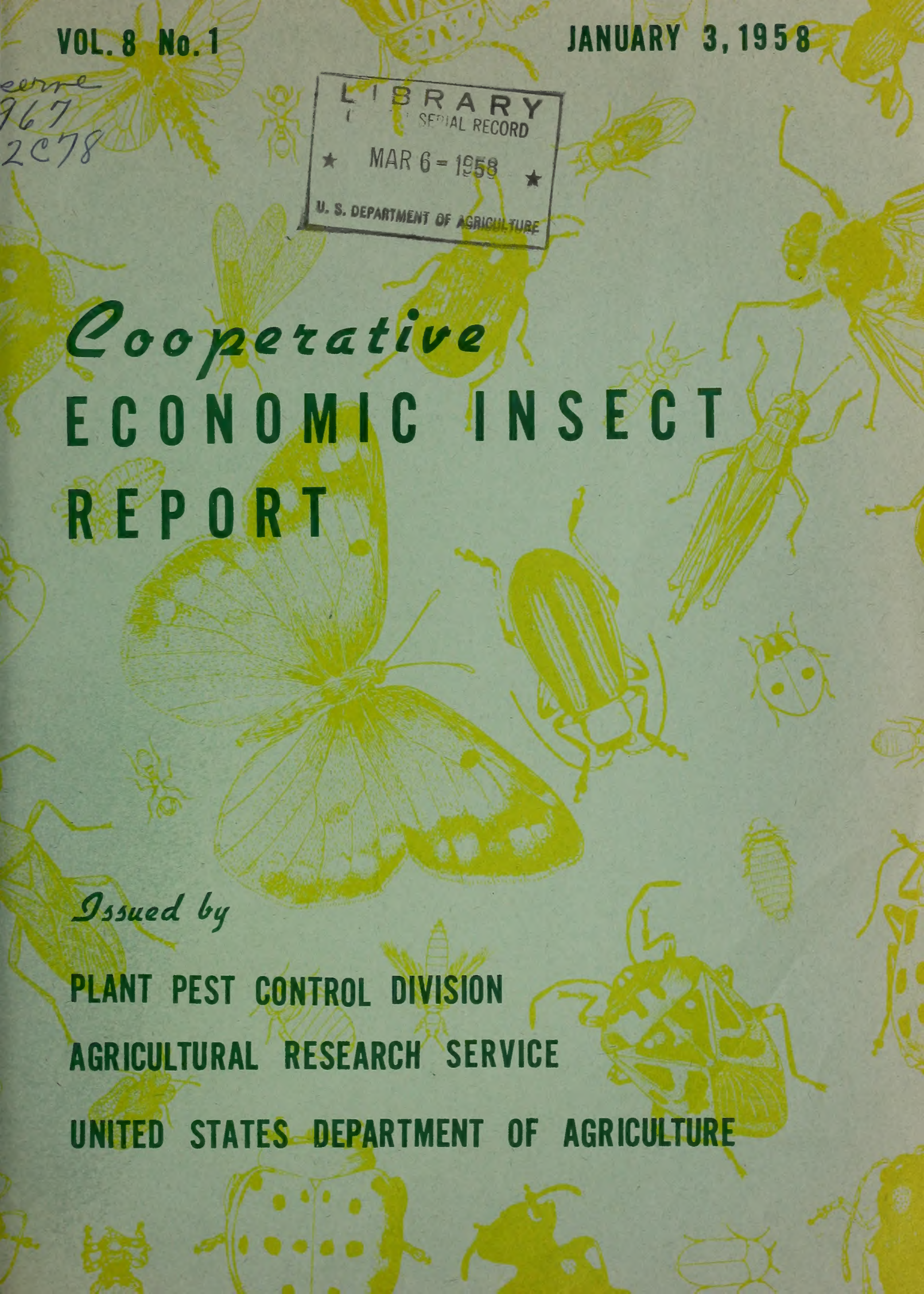

Cooperative
ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

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Volume 8 January 3, 1958 Number 1

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

SUMMARY OF INSECT CONDITIONS - 1957 in New Jersey (p. 6) and in Maine (p. 9).

Distribution of WESTERN PINE BEETLE. (p. 5).

INSECTS not known to occur in the United States. (p. 11).

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Reports in this issue are for the week ending December 27 unless otherwise designated.

WEATHER BUREAU 30-DAY OUTLOOK

JANUARY 1958

The Weather Bureau's 30-day outlook for January calls for temperatures to average below seasonal normals over most areas east of the Continental Divide, except for near to above normal over the Northeast and in the Southern Plains. This marks a wintry change from the mild conditions which have prevailed over the past few weeks. West of the Divide temperatures are expected to average above normal, except near normal over the Southern Plateau.

Precipitation is expected to exceed normal from the Ohio and Lower Mississippi Valleys eastward to the Atlantic Seaboard, with increasing snows in the northern half as the month progresses. Above normal precipitation is also anticipated over California. Subnormal amounts are indicated over the Southern Plains, Western Great Lakes Region, and Upper Mississippi Valley. In unspecified areas about normal is predicted.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D.C. Price $4.80 a year, $2.40 a half year.

CEREAL AND FORAGE INSECTS

GREENBUG (Toxoptera graminum) - OKLAHOMA - Common in volunteer and planted oats in Garvin County. Very light numbers (averaging considerably less than 1 per linear foot of row) from scattered fields of wheat in the south central, central and north central areas. The higher populations found in fields containing volunteer grain or in fields adjacent to volunteer grain. (Coppock, Dec. 21).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Common on volunteer barley in all sections of the State; light numbers (0 to 20 per linear foot of row) on planted barley in all sections. (Coppock, Dec. 21).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - OKLAHOMA - No overwintering larvae found in 200 corn plants examined in 2 fields in Love County. (Coppock, Dec. 21).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Average number of bugs per square foot in hibernation was 2,031 in Love County, 3,110 in Jefferson County and 856 in Garvin County. (Fed.-State Chinch Bug Survey, Dec. 21). ARKANSAS - Surveys conducted in November show a much smaller number in hibernation than same time in 1956. The same 17 northeastern and east central counties were surveyed in 1956 and 1957. Extremely heavy rainfall has occurred in the area surveyed throughout the year. Classification of counties based on average number of bugs in hibernation in 1957 showed 11 counties non-economic, 1 light, 2 moderate, 3 severe and 0 very severe. The same counties in 1956 were classed as 0 non-economic, 1 light, 2 moderate, 7 severe and 7 very severe. (Boyer, Dec. 21).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Check of 252 samples (2 square inches each) of alfalfa in 4 fields in Stillwater area revealed 26 aphids. (Bieberdorf). Populations further reduced statewide. Low to very low numbers in all areas; rare in new plantings. (Coppock, Dec. 21). UTAH - At lower population level than few preceeding weeks in Washington County. (Knowlton, Dec. 9).

TRUCK CROP INSECTS

BEET LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Populations in canyon areas of western San Joaquin Valley remain scattered. It is expected that concentrations will develop along favorable south slope locations and that winter spraying will commence in about two weeks. Reports of high leafhopper populations on desert weeds to the west of Imperial Valley cultivated areas are to be investigated. (Cal. Coop. Rept.).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - OKLAHOMA - Nine lint cleaner and 5 gin stands inspected in 10 counties; total of 31 larvae found. (Fed.-State PWB Comm., Dec. 21). ARKANSAS - Only 2 larvae recovered from gin trash samples in State. A total of 19,003 bushels of trash in 51 counties have been run by end of November. Through November 1956, a total of 194 larvae were found in 10,460 bushels of gin trash from sites located in 50 counties. (Boyer, PPC).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

LOCUST BORER (*Megacyllene robiniae*) - UTAH - Caused numerous trees to be removed in Holladay and Cottonwood areas of Salt Lake County. (Knowlton, Dec. 20).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE LICE - UTAH - Infestations building up generally on cattle in many areas of State. Three thousand head recently dipped in Sanpete County. (Knowlton, Dec. 20).

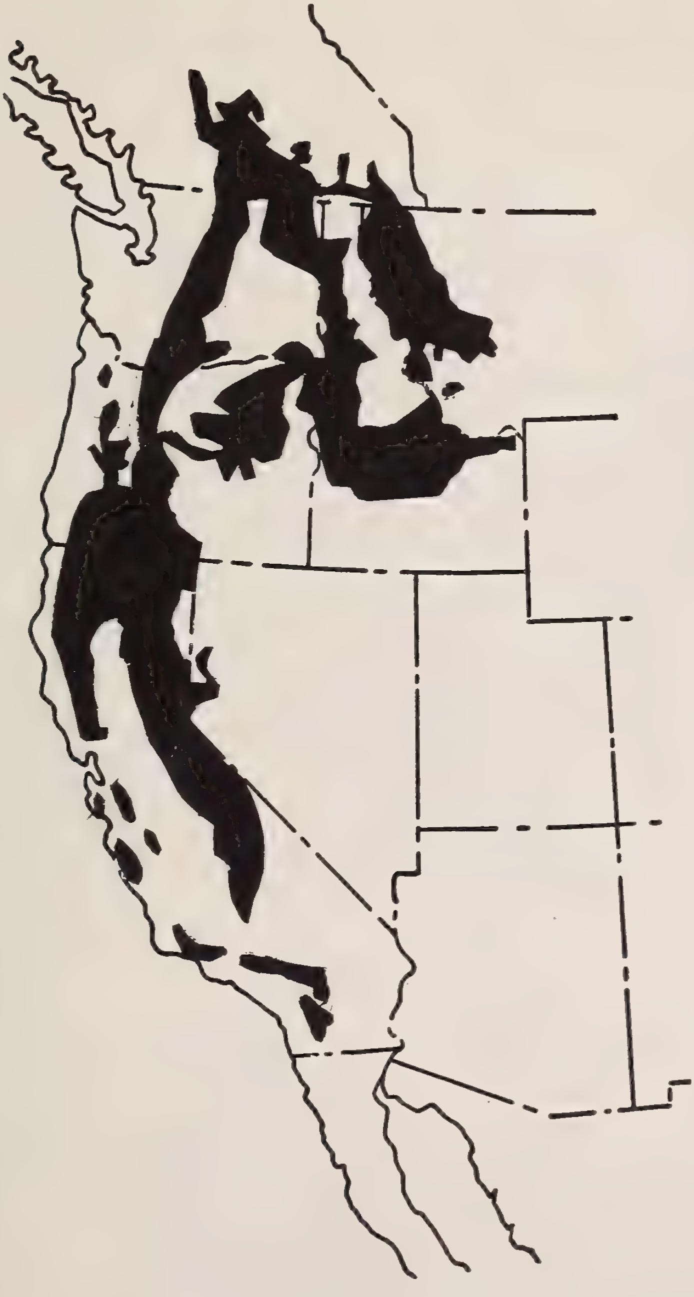
SHEEP BOT FLY (*Oestrus ovis*) - UTAH - Found in heads of sheep throughout State, particularly where *post mortem* examinations are made. (Knowlton, Dec. 20).

SHEEP KED (*Melophagus ovinus*) - UTAH - Numerous on some herds in Sanpete and Millard Counties. (Knowlton, Dec. 20).

LIGHT TRAP COLLECTIONS

	Pseudaletia unipuncta	Agrotis ypsilon	Peridroma margaritosa
ARKANSAS			
Stuttgart 12/12-18	3	1	1
Fayetteville 12/15-21	25	9	
SOUTH CAROLINA (County)			
Oconee 12/21-27		2	

DISTRIBUTION OF WESTERN PINE BEETLE (*Dendroctonus brevicomis*)
in United States and British Columbia



USDA, FS, Forest Pest
Leaflet 1, June, 1955

SUMMARY OF INSECT CONDITIONS - 1957

NEW JERSEY

Prepared by Department of Entomology, Rutgers University

Highlights: Fall populations of EUROPEAN CORN BORER were reduced by 75 percent from 1956. Drought conditions favored unusually large populations of tetranychid mites on many crops. CODLING MOTH, CABBAGE LOOPER, CORN EARWORM and ALFALFA WEEVIL were very damaging. A pest, new to New Jersey, the PEPPER WEEVIL, caused moderate to severe damge to peppers in a restricted area near Vineland, New Jersey. ELM LEAF BEETLES and BAGWORM populations were reduced sharply.

Cereal and Forage Insects: MEADOW SPITTLEBUG (Philaenus leucophthalmus) caused less damage than usual to alfalfa and clover plantings. Only in the area of Somerset, northern Hunterdon, southern Warren and Morris Counties was damage of econolic importance in unsprayed fields. ALFALFA WEEVIL (Hypera postica) caused moderate to severe damage in all areas of the State except in parts of Sussex County which are not yet infested. PEA APHID (Macrosiphum pisi) caused less damage than usual. In some areas of southern counties, populations reached 200 to 300 per sweep during May but, in general, populations were much lighter. Soybeans in central and southern New Jersey were heavily attacked by MITES (Tetranychus spp.). This is the first year in many years that soybeans have been defoliated and yields reduced by these pests. Overwintered EUROPEAN CORN BORER (Pyrausta nubilalis) was present in greatest numbers in several years. However, unfavorable drought conditions and apparently a buildup of parasites caused populations to be generally low and the 1957 fall populations of 95.2 borers per 100 plants is slightly less than one-fourth of 1956 fall population. First generation of borers caused considerable damage in early sweet corn plantings and in vegetable crops. However, damage to field corn by second generation was very slight. ARMYWORM (Pseudaletia unipuncta) caused less damage than usual and only a few fields in southern counties were heavily infested. CORN LEAF APHID (Rhopalosiphum maidis) was found in large numbers on corn throughout the State but in some southern areas of the State it was present in economic numbers on field corn. CORN FLEA BEETLE (Chaetocnema pulicaria) abundance was severely reduced by winter temperatures. However, populations of up to 1 beetle per 3 plants were observed in early sweet corn plantings and instance of bacterial wilt reached nearly 40 percent in a few infested fields. The damage was spotty and not general. POTATO LEAFHOPPER (Empoasca fabae) did not appear to be a major pest. Some alfalfa fields in the northwestern counties showed chlorosis from leafhopper damage but economic losses were apparently slight.

Fruit Insects: CODLING MOTH (Carpocapsa pomonella) was more numerous than usual. First generation activity and larval activity was noted about May 30 in southern part of State and second generation larvae were present by July 15. A period of heavy entry of apples by larvae about August 18 indicated a partial third generat ation of this insect. UNSPOTTED TENTIFORM LEAF MINER (Callisto geminatella) appeared for the first time in any numbers. Moderate to severe defoliation was found in a few orchards in the southern area. Observations in October indicate that all orchards in this area are moderately infested with as high as 85 percent of the foliage showing up to over 3 mines per leaf in some orchards. PEACH SILVER MITE (Vasates cornutus) was generally present in August and September for the first time in some years. Some economic damage may have been produced. APPLE MAGGOT, (Rhagoletis pomonella) was present in greater than usual numbers in unsprayed home orchards, in central and northern counties. RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) was very apparent in egg stage during bloom on apples. However, second and third generation activity was light and little economic damage reported on this pest. EUROPEAN RED MITE (Panonychus ulmi) was normally present. However, drought conditions accentuated this problem and some bronzing and leaf drop was observed in all areas of the state where mites were not controlled.

ORIENTAL FRUIT MOTH (Grapholitha molesta) was present in usual numbers and moderate infestations of TWO-SPOTTED SPIDER MITE (Tetranychus telarius) developed in late season on peach foliage. A MEADOW NEMATODE (Pratylenchus sp.) damaging root systems were implicated in winter kill of young peach trees in many areas of southern New Jersey. Populations of BLUEBERRY MAGGOT (Rhagoletis sp.) were several times higher than 1956. MITES (Tetranychus spp.) were present in large numbers in large numbers in strawberry plantings throughout the State in March. By May, large areas in fields in southern New Jersey had been killed by SPIDER MITES, particularly in sandy soils. Unusually warm conditions in early season caused PLUM CURCULIO (Conotrachelus nenuphar) to be active in peach blocks before petal fall. Considerable feeding on blossoms was apparent. Normal damage by PLUM CURCULIO occurred in peach and apple plantings.

Truck Crop Insects: CABBAGE LOOPER (Trichoplusia ni) was very abundant on all crucifers, lettuce and several other plants. Damage from July until October was severe. This insect is rarely a major pest prior to that time, although some mature looper larvae were found in the southern area in late May. IMPORTED CABBAGEWORM (Pieris rapae) was present in May and June in large numbers causing moderate damage where control measures were not followed. CORN EARWORM (Heliothis zea) caused the most damage in many years. First moths were picked up in late May but moth flights did not become heavy until August and September. Light damage from this insect was also observed in late tomatoes and peppers. FALL ARMYWORM (Laphygma frugiperda) activity was first noted in mid-July and caused damage on late sweet corn plantings. SPINACH LEAF MINER (Pegomya hyoscyami) was present and damaging early in the season on overwintered and spring seeded spinach. A SERPENTINE LEAF MINER (Liriomyza sp.) caused defoliation of tomatoes and eggplant in the central and southern counties during July and August. A LEAF MINER (probably L. brassicae) was very common on crucifers, and much more abundant in 1957 than for many years. PEPPER WEEVIL (Anthonomus eugenii) was reported in the State for the first time, in the Vineland area in southern New Jersey. Several fields involving 40 or 50 acres were essentially destroyed. EUROPEAN CORN BORER caused moderate damage in its first generation and very light damage in second generation to peppers, eggplant, sweet corn, and tomato. ASPARAGUS BEETLES (Crioceris asparagi and C. duodecimpunctata) invaded asparagus fields in great numbers during late April and early May. Normally, emergence of beetles from hibernation is prolonged over a long period of time. MEXICAN BEAN BEETLE (Epilachna varivestis) damage was very slight. CABBAGE MAGGOT (Hylemya brassicae) caused general widespread damage in scattered northern market gardening areas. Damage on the extensive southern acreages was nil. Several FLEA BEETLES (particularly Phyllotreta cruciferae) were less numerous than usual on crucifers. COLORADO POTATO BEETLE (Leptinotarsa decemlineata) caused less damage than usual. Emergence of adults from hibernation and their appearance in the field was concentrated in a short period after potato vines began to emerge from the soil. CABBAGE APHID (Brevicoryne brassicae) was more numerous and damaging than usual on cabbage, broccoli and cauliflower. TOMATO RUSSET MITE (Vasates lycopersici) was more common than in 1955 and 1956 and several fields in southern areas suffered moderate to severe damage.

Forest, Ornamental and Shade Tree Insects: In general these insects were not especially abundant in 1957. Some of the normally important pests, ELM LEAF BEETLE (Galerucella xanthomelaena) and CANKERWORMS (Alsophila pometaria and Paleacrita vernata) were rarely seen and no damage resulted. EASTERN TENT CATERPILLAR (Malacosoma americanum) continued to be fairly abundant on wild cherry and unsprayed fruit trees. Damage to valuable trees was negligible. BAGWORM (Thyridopteryx ephemeraeformis) populations were low, apparently as the result of parasitism. Isolated outbreaks occurred in southern counties. MIMOSA WEBWORM (Homadaula albizziae) activity was less apparent than usual, being confined to southern counties. FALL WEBWORM (Hyphantria cunea) was generally present throughout the summer on many trees, but not seriously destructive. PINE SAWFLIES (Neodiprion spp.) were spotty, not abundant, and were present in early spring only. GYPSY MOTH (Porthetria dispar) caused no serious defoliation injury. NANTUCKET PINE MOTH (Rhyacionia frustrana) and EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) were less common than previous years. A HEMLOCK SCALE

(*Fiorinia externa*) is increasing in importance. TULIPTREE SCALE (*Toumeyella liriodendri*) also seem to be coming back after being less common for a number of years. Usual populations of EUONYMUS SCALE (*Unaspis euonymi*) were present. AN OAK KERMES SCALE (*Kermes pubescens*) was more abundant than usual. ELM SCURFY SCALE (*Chinonaspis americana*) and EUROPEAN ELM SCALE (*Gossyparia spuria*) were not especially troublesome except in isolated locations in southern counties. EASTERN SPRUCE GALL APHID (*Chermes abietis*) and COOLEY SPRUCE GALL APHID (*Chermes cooleyi*) were seldom seen. PAINTED MAPLE APHID (*Drepanaphis acerifoliae*) was fairly severe on nursery and street maples in late August and September. SYCAMORE LACE BUG (*Corythucha ciliata*) and A LACE BUG (*C. bellula*) were fairly abundant. SOUTHERN RED MITE (*Oligonychus ilicis*) overwintering eggs were abundant on holly but populations were low during the growing season. There was no fall buildup in 1957. American holly had few mites. A MAPLE MITE (*Oligonychus* sp.) was abundant in nurseries. There were heavy but fluctuating populations in late spring and early summer. Many species of OAK GALL INSECTS were abundant. Populations have remained high for several years. BIRCH LEAF MINER (*Fenusa pusilla*) was severe. The second brood matured near mid-June and was much more destructive than usual. HOLLY LEAF MINERS (*Phytomyza* spp.) were fairly abundant on American holly. Controls were often successful. JAPANESE WEEVILS (*Calomycterus setarius* and *Pseudocneorhinus bifasciatus*) may be increasing in importance in northern counties. Increased numbers of reports have been received the past several years. JAPANESE BEETLE (*Popillia japonica*) adults caused more concern than previous years. Infestations were spotty and caused only minor damage. BLACK VINE WEEVIL (*Brachyrhinus sulcatus*) severely attacked *Taxus* in northern counties.

Insects Affecting Man and Animals: The SALT-MARSH MOSQUITO (*Aedes sollicitans*) was held below major nuisance levels in the seashore resort areas between early July and late August. Favorable tide and rainfall patterns enabled mosquito control agencies to meet the problem adequately in all but localized areas in Cape May County. Mosquito trap sampling in Delaware Bay shore counties showed collections of *A. sollicitans*, *A. vexans* and *Culex pipiens* comparable to the ten year average. Below average summer rainfall confined urban *C. pipiens* to water areas heavily polluted with industrial and domestic wastes.

Stored-Product Insects: Abundance and damage by stored grain insects was considerably less than in 1956 is undoubtedly correlated with the much lower moisture content of the grain this year. Approximately 46 bins of wheat, rye, and barley were examined monthly, and of this number, 35 had been treated. Probe samples indicated 9 bins of weevily grade and the dominant insects responsible were SAW-TOOTHED GRAIN BEETLE (*Oryzaephilus surinamensis*) in 3 bins, RED FLOUR BEETLE (*Tribolium castaneum*) in 2 bins, INDIAN-MEAL MOTH (*Plodia interpunctella*) in 2 bins, RUSTY GRAIN BEETLE (*Laemophloeus ferrugineus*) in 1 bin and FLAT GRAIN BEETLE (*L. pusillus*) in 1 bin. Abundant surface populations of INDIAN-MEAL MOTH were absent in most of the treated bins and present in most untreated bins. GRANARY WEEVIL (*Sitophilus granarius*) was present in one wheat bin. Field infestation of wheat, rye, barley, and corn by ANGOUMOIS GRAIN MOTH (*Sitotroga cerealella*) was negligible as was later infestation of these stored grains by this pest. Hymenopterous parasites were very abundant in many infested bins, and in some instances, appeared to successfully deter the buildup of insect populations. SAW-TOOTHED GRAIN BEETLE and INDIAN-MEAL MOTH are the most prevalent pests of stored food products in the home.

Miscellaneous Insects: Adult SOD WEBWORMS (*Crambus* sp.) were observed in small numbers in Bergen County early in September. HAIRY CHINCH BUG (*Blissus leucopterus hirtus*) was abundant and destructive although localized in distribution in northern counties. Difficulty was experienced in control in August and September. PAVEMENT ANT (*Tetramorium caespitum*) continues as the dominant household ant pest. The flight of EASTERN SUBTERRANEAN TERMITE (*Reticulitermes flavipes*) was heavy but confined to a shorter than usual period in April and May. CLOVER MITE (*Bryobia praetiosa*) was abundant in April. It has been reported as active during all winter months. Reports of infestations of BROWN-BANDED ROACH (*Supella supellectilium*) have increased in number. Reports of GERMAN COCKROACH (*Blattella germanica* have also increased. The dominant fabric pest continues to be BLACK CARPET BEETLE (*Attagenus piceus*).

SUMMARY OF INSECT CONDITIONS - 1957

MAINE

Reported by R. W. Paulson and L. W. Boulanger

Highlights

Heavy winter-kill of GYPSY MOTH (*Porthetria dispar*) egg masses above snow line, and equally severe mortality of overwintering larvae of the BROWN-TAIL MOTH (*Nygmia phaeorrhoea*). Infestations of these two pests remained at the negligible or light stage through the season. Outbreak of SPRUCE BUDWORM (*Choristoneura fumiferana*) occurred in northeastern Maine. This condition is expected to carry through 1958. First record of EASTERN SUBTERRANEAN TERMITE (*Reticulitermes flavipes*) in Maine. An infestation was found in Cumberland County. CUTWORM outbreak occurred in Oxford and Somerset Counties. Losses in corn plantings ran as high as 50 percent. Severe CYCLAMEN MITE (*Steneotarsonemus pallidus*) injury occurred in several strawberry plantings. Severe BLACK FLY (*Simulium* sp.) conditions; flies persisted long past normal time of abatement. Appreciable and rapid spread northward of EUROPEAN EARWIG (*Forficula auricularia*).

Cereal and Forage Insects: May 1 to June 30 - SEED-CORN MAGGOT (*Hylemya cilicrura*) caused moderate damage to beans in the Bangor area. CUTWORMS severely damaged corn in Bangor and Hermon. MEADOW SPITTLEBUG (*Philaenus leucophthalmus*) infestations were heavier than in 1956; injury to various crops ranged from light in Aroostook County to moderate in southern and western portions. STALK BORER (*Papaipema nebris*) infestations were heavier than usual causing moderate injury to corn, and light injury to various crops in Aroostook County. ARMYWORM (*Pseudaletia unipuncta*) moth flights reached peak June 13-20 as indicated by light traps in Monmouth. July 1-30; EUROPEAN CORN BORER (*Pyrausta nubilalis*) outbreak in Androscoggin County severely injured corn. Localized CUTWORM outbreak in Oxford and Somerset Counties caused severe injury to corn. Heavy infestations appeared limited to fields heavily dressed with chicken manure. One planting suffered about 50 percent loss.

Fruit Insects: May 1 to June 30 - Apples in the Houlton area were severely injured by EYE-SPOTTED BUD MOTH (*Spilonota ocellana*). CODLING MOTH (*Carpocapsa pomonella*) overwintering larvae suffered only light winter-kill. Less than 10 percent of larvae recovered in the spring were killed by the cold temperature of last winter. Parasitism and disease incidence were much higher. BLUEBERRY MAGGOT (*Rhagoletis pomonella*) adults emerged on June 21. This is considerably earlier than what might be termed normal. BUMBLE BEES (*Bombus* sp.) and other wild pollinators appeared to be more numerous than in 1955 or 1956 in most blueberry-producing areas. BLUEBERRY THRIPS (*Frankliniella vaccinii*) infestations were heavy in the Knox-Lincoln blueberry areas. Up to three DDT dustings were applied before control was obtained. July 1-30 - Severe local outbreaks of APPLE MEALYBUG (*Phenacoccus aceris*) were found in the Livermore Falls and Turner areas. Fruit on infested trees was heavily smutted from honeydew. APPLE MAGGOT (*Rhagoletis pomonella*) emergence began July 7 in cages in Monmouth area; peak emergence was rapid, taking place on July 23rd. CYCLAMEN MITE (*Steneotarsonemus pallidus*) infestations were found in the Deblois and Gray areas. Damage to about 20 acres of strawberries was especially heavy in Deblois plantings. August 1-30 - EUROPEAN RED MITE (*Panonychus ulmi*) and TWO-SPOTTED SPIDER MITE (*Tetranychus telarius*) infestations were moderate over the entire State. Generally, good control was obtained with regular spray practices but a few orchards in the Standish and Vassalboro areas suffered moderate damage. APPLE MAGGOT emergence was nearly 97 percent completed by August 15. Appreciable numbers of flies were caught in bait traps in Monmouth and New Gloucester orchards during the month. BLUEBERRY MAGGOT infestations were almost nonexistent in eastern areas. The crop was regarded by experienced agents as one of the cleanest on record. September 1-30 - APPLE MAGGOT continued to emerge in cages until September 6. Fly activity in orchards continued well into September as indicated by bait trap captures. The gradual appearance of RED-BANDED LEAF ROLLER (*Argyrotaenia velutinana*) in most apple-producing areas has caused some concern. Although infestations are still very low, proper conditions could cause a sharp rise in population numbers with ensuing damage.

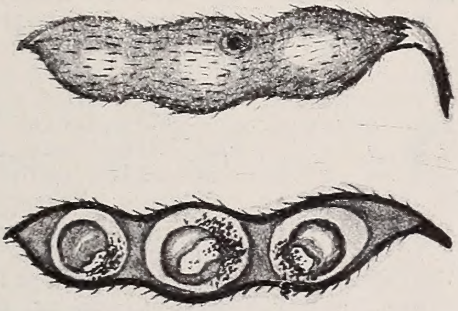
Truck Crop Insects: May 1-June 30 - A planting of Chinese cabbage was severely damaged by CABBAGE MAGGOT (*Hylemya brassicae*) in the Scarboro area. POTATO FLEA BEETLE (*Epitrix cucumeris*), POTATO APHID (*Macrosiphum solanifolii*), FOXGLOVE APHID (*Myzus solani*) and BUCKTHORN APHID (*Aphis abbreviata*) infestations were light and damage to potatoes was minor. The last three species named had infested up to 9 percent of untreated plants by June 28. July 1-30 - POTATO APHID and POTATO FLEA BEETLE caused moderate damage to potatoes in Aroostook County. SQUASH BUG (*Anasa tristis*) infestations increased in Cumberland County; squash and potatoes suffered moderate injury. CABBAGE APHID (*Brevicoryne brassicae*) damage was moderate on cabbage in the Hartland area. August 1-30 - ROOT APHID (tentatively identified as *Pemphigus balsamiferae*) infestations were moderate in South Portland and Cape Elizabeth. Damage to lettuce was moderate. This aphid is rapidly becoming an important pest of lettuce in Maine.

Forest, Ornamental, and Shade Tree Insects: (From R. W. Nash, Maine Forest Service Augusta): May 1-June 30 - EASTERN TENT CATERPILLAR (*Malacosoma americanum*) infestations in eastern Maine were light compared with past years. Heavy winter-kill of GYPSY MOTH (*Porthetria dispar*) egg masses and BROWN-TAIL MOTH (*Nygmia phaeorrhoea*) overwintering larvae resulted in very light infestations of these two pests. SPRUCE BUDWORM (*Choristoneura fumiferana*) infestation and damage on fir was moderate in northern Maine. A statewide outbreak of A PINE LEAF APHID caused moderate injury to white pine. Galls could be found on spruce in mid-May and migrants were present on pine on June 7. Eastern Maine hardwood stands were moderately damaged by FALL CANKERWORM (*Alsophila pometaria*). BIRCH LEAF MINER (*Fenusa pusilla*) underwent a statewide outbreak causing moderate to heavy damage to birches. Eggs were hatching by May 30 while egg deposition was still in progress. July 1-30 - The effectiveness of the winter-kill of GYPSY MOTH eggs was evident in the fact that only one defoliation was observed. This was atop Agamenticus Mountain in York County. Infestations in the State remained at an extremely low level. (E. S. Russell, Dept. of Agr.). SPRUCE BUDWORM reached outbreak proportions in July. Damage to fir and spruce was moderate in northeastern areas. ELM LEAF BEETLE (*Galerucella xanthomelaena*) infestations were heavy in local areas; severe damage was evident in central Maine. EUROPEAN EARWIG (*Forficula auricularia*) infestations are becoming moderate from New Hampshire border north to Portland. Most insects above, with the exception of FALL CANKERWORM, increased above the 1956 levels. September 1-30 - SPRUCE BUDWORM infestations persisted at outbreak level causing moderate damage to fir and spruce. It is forecasted to remain at outbreak level through 1958. SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus*) was abundant north to Portland, lower numbers recovered north of Portland to Brunswick.

Insects Affecting Man and Animals: May 1-June 30 - BLACK FLY (*Simulium* sp.) outbreak was statewide. Pests remained active much beyond normal abatement date. The Maine Forest Service reported an infestation of EASTERN SUBTERRANEAN TERMITE (*Reticulitermes flavipes*) in Cumberland County. This is the first State record of the pest. A MIDGE was annoying to man in Hancock County. MOSQUITOES were moderate to heavy in Cape Elizabeth area.

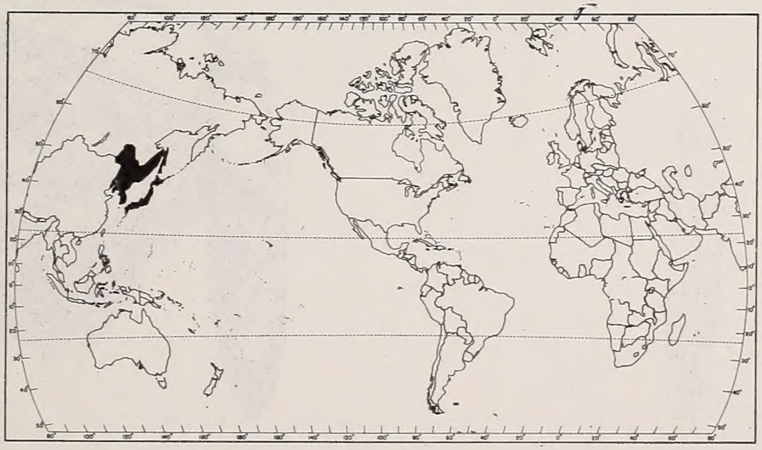
SOYBEAN POD BORER (Grapholitha glycinivorella (Matsumura))

Economic Importance: The soybean pod borer is a well known pest of soybeans in the Far East. It is widely distributed in Japan and causes serious damage every year in Hokkaido where it has attacked up to 94 percent of the beans in some localities. Seed losses up to 20-30 percent have been recorded in some years in the Soviet Far East. Infestations are apparently worse on the "hairy" varieties and those that flower before the end of July in Manchuria and on the late varieties in Korea. Two seeds in each pod are usually attacked. These are ruined for seeding purposes and the oil content is reduced.



Damage to Soybeans and Pods

Distribution: Occurs throughout Japan, Korea, and parts of China (Manchuria) and the Soviet Far East (Maritime Territory, Sakhalin).



General Distribution of Soybean Pod Borer

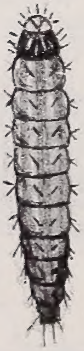
Hosts: Preferred host is soybean. Will also attack cowpeas and sundial lupine (Lupinus perennis).

Olethreutidae, Lepidoptera

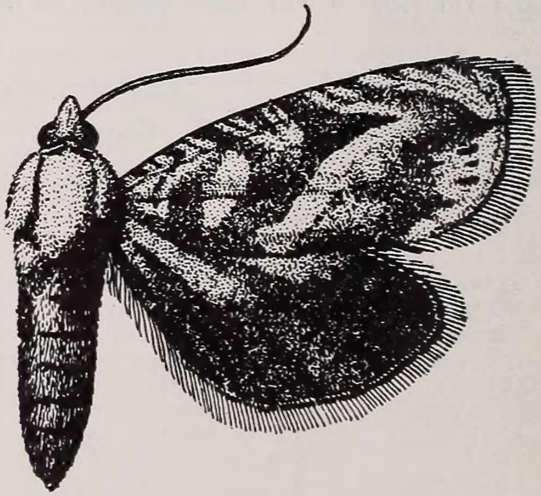
No. 37 of Series

Life History and Habits: In Manchuria there is but one generation a year; the adults first appearing in August and early September, living for about 10 to 13 days. The females lay eggs singly, 164 to 167 per female, on the pods, and sometimes just before harvest, on the leaves and stems. The larvae hatch in 7 to 8 days and are full-fed in 18 to 21 days. They enter the soil to hibernate in cocoons. Pupation begins late in July the following year and moths emerge in 11 to 13 days. Young larvae feed on the young green seeds. Infested beans are difficult to detect by examinations of the outside hull. Usually a small spot, as though splashed with mud, indicates the entrance hole.

Description: The adult is as follows: "Primaries grayish-black, mottled with dull yellow irregular markings, with indigo luster in a certain light; outer half of the costal margin distinctly crossed alternately by short oblique yellow and dark liturae; a curved dark narrow stripe near at the costal margin towards the inner angle ending at the place of the second dorsal vein, after making an acute angle at the subcostal region; a large wedge shaped dusky patch nearly parallel with the former belt at the interno-outer margin, with the broad base at the hind margin; outer margin dull yellow, and there is a golden patch near at the center furnished with three black spots internally in a transverse row; a blackish oblique stripe at the apical region, bordered exteriorly with grayish-blue; a submarginal line and the fringe dusky gray. Secondaries dusky black, a little paler towards the base, with gray fringe and costal margin. Body dull black; head with a crown-like tuft of an olivaceous-yellow color. Wings below altogether paler and more uniform in color, with no markings except on the costal margin. Body beneath gray; legs, antennae, labial palp, yellowish-gray; compound eyes olivaceous. Wing expanse - 13 to 15 mm.; body length - 7 mm." (from Matsumura, 1898). The eggs are yellowish when laid and the caterpillars are rosy-orange when mature. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies and the U. S. National Museum). CEIR 8(1) 1-3-58



Larva



Adult

Figures (except map): Adult from Iconographia Insectorum Japonicorum, 2nd Edit. 1954. 1736 pp., Tokyo. Larva and damage from Engel'gardt, V. and Mishchenko, A. 1931. In Bolezni i Vrediteli Soevykh Bobov na Dal'nem Vostoke. Dal'nevostochnoe Kraevoe Zemel'noe Upravlenie Dal'stazra. pp. 85-112, Vladivostok.